

Patent claims

1. An at least two-layer, tubular food casing with barrier action for oxygen and water vapor, which is capable of absorbing a food additive and storing it, and dissipating it into the food, wherein the inner layer facing toward the food encompasses a matrix composed of an organic thermoplastic polymer material and encompasses, embedded therein, at least one pulverulent organic filler which comprises at least one food additive transferable to the contents.
2. The food casing as claimed in claim 1, wherein the food additive is a transferable, preferably liquid, colorant, odorant, flavoring, and/or decorative medium.
3. The food casing as claimed in claim 1 or 2, wherein the pulverulent organic filler absorbs and stores the transferable food additive with swelling in the temperature range from 0 to 40 °C and then transfers it to the food, with partial dissolution of the organic filler, at a temperature in the range from above 40 to 100 °C.
4. The food casing as claimed in one or more of claims 1 to 3, wherein the pulverulent organic filler is a natural material, preferably pulverulent carrageenan, agar, soybean protein, ground carob beans, native, destructured, and/or modified starch, or a mixture thereof.
5. The food casing as claimed in one or more of claims 1 to 4, wherein the particles of the

- 5 pulverulent organic filler have, prior to addition of the food additive, a  $d(0.5)$  value of less than 20  $\mu\text{m}$  for a filler-substrate layer thickness of from 60 to 100  $\mu\text{m}$ , and a  $d(0.5)$  value less than 50  $\mu\text{m}$  for a filler-substrate layer thickness of from 100 to 200  $\mu\text{m}$ .
- 10 6. The food casing as claimed in one or more of claims 1 to 5, wherein the proportion of the pulverulent organic filler is up to 60 % by weight, preferably from 15 to 45 % by weight, particularly preferably from 25 to 35 % by weight, based in each case on the weight of the inner layer.
- 15 7. The food casing as claimed in one or more of claims 1 to 6, wherein the proportion of the transferable food additive is from 5 to 150 % by weight, preferably from 30 to 80 % by weight, based in each case on the weight of the particulate  
20 filler.
8. The food casing as claimed in claim 1, wherein the transferable food additive is a liquid smoke.
- 25 9. The food casing as claimed in claim 1, wherein the inner layer of the tube film comprises a polymer matrix whose water vapor permeation coefficient  $P_{\text{H}_2\text{O}}$  is in the range from 3 to 20  $\text{g/m}^2 \text{ d}$ .
- 30 10. The food casing as claimed in claim 1, wherein the matrix encompasses an ethylene-vinyl acetate copolymer.
- 35 11. The food casing as claimed in claim 10, wherein the proportion of vinyl acetate units in the ethylene-vinyl acetate copolymer is from 5 to 50 % by weight,

preferably from 15 to 40 % by weight, particularly preferably from 18 to 34 % by weight.

- 5 12. The food casing as claimed in claim 9, wherein the polymer matrix has at least one admixed compatibilizer.
- 10 13. The food casing as claimed in claim 12, wherein the compatibilizer is composed of the inner-layer matrix material onto which from 0.1 to 10 % by weight, preferably from 0.3 to 5 % by weight, of a compatibilizer molecule has been grafted, following peroxide-radical initiation.
- 15 14. The food casing as claimed in claim 13, wherein the compatibilizer is a maleic-anhydride- or glycidyl-methacrylate-grafted ethylene-vinyl acetate copolymer.
- 20 15. The food casing as claimed in one or more of claims 1 to 14, wherein a layer based on polyolefin(s) is adjacent to the filler-substrate layer and acts as barrier layer for water vapor.
- 25 16. The food casing as claimed in one or more of claims 1 to 15, which encompasses at least one layer which is based on polyamide and/or copolyamide and acts as barrier layer for oxygen.
- 30 17. The use of the food casing as claimed in one or more of claims 1 to 16 as sausage casing.